CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-10/477a/CEMENT/2017-18 Date: 30.10.2017

TEST REPORT ON CEMENT

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of Work**	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
*** Sample ID**	:	Cement –Sample 1
Sample Received on	:	28.10.2017
Period of Testing	:	28.10.2017 to 30.10.2017

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988 (RA-2014)	29.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	175Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	465 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988 (RA-2014)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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VIDYARANI P.K.
Technical Manager

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಬೆಂಗಳೂರು

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-10/477a/Cube/2017-18 01.12.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of the work	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
* Sample ID	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	01.12.2017

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	03.11.2017	01.12.2017	8.432	487.3	21.66
2	03.11.2017	01.12.2017	8.310	513.4	22.82
3	03.11.2017	01.12.2017	3.193	508.3	22.59

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VIDYARANI P.K.
Technical Manager

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-10/477a/Cube/2017-18 01.12.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of the work**	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
*** Sample ID**	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
*** Grade of Concrete**	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	01.12.2017

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	03.11.2017	01.12.2017	8.129	486.2	21.61
2	03.11.2017	01.12.2017	8.435	479.2	21.30
3	03.11.2017	01.12.2017	8.082	520.4	23.13

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of the work**	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
*** Sample ID**	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
*** Grade of Concrete**	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	01.12.2017

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	03.11.2017	01.12.2017	8.341	509.3	22.64
2	03.11.2017	01.12.2017	8.107	517.5	23.00
3	03.11.2017	01.12.2017	8.234	520.6	23.14

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-10/477a/Cube/2017-18

05.12.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of the work**	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
*** Sample ID**	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
*** Grade of Concrete**	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	05.12.2017

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	07.11.2017	05.12.2017	8.118	500.8	22.26
2	07.11.2017	05.12.2017	8.492	477.5	21.22
3	07.11.2017	05.12.2017	8.257	511.3	22.72

*Information is furnished by the Customer/Representative.

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Technical Manager

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-10/477a/Cube/2017-18 05.12.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of the work**	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
*** Sample ID**	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
*** Grade of Concrete**	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	05.12.2017

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	07.11.2017	05.12.2017	8.258	485.3	21.57
2	07.11.2017	05.12.2017	8.073	513.7	22.83
3	07.11.2017	05.12.2017	8.462	499.2	22.19

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-10/477a/SAND-Gradation/2017-18 30.10.2017

TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
* Sample ID	:	Fine Aggregates-Sample 1
Technical Reference	:	IS : 2386 (Part 1) - 1963 (RA-2011)
Sample Received On	:	28.10.2017
Date of Testing	:	30.10.2017

Total Wt. of Aggregates in gms = **1000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	92.80	90-100	90-100	90-100	95-100
2.36	72.30	60-95	75-100	85-100	95-100
1.18	48.70	30-70	55-90	75-100	90-100
600 Micron	26.50	15-34	35-59	60-79	80-100
300 Micron	14.00	5-20	8-30	12-40	15-50
150 Micron	7.50	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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VIDYARANI P.K.
Technical Manager

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A6-13

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Job No.: CTCE/BBMP/W.No.13/KRIDL/CSR-10/477a/AGG/GR/2017-18 30.10.2017

TEST REPORT ON SIEVE ANALYSIS OF COARSE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
* Sample ID	:	Coarse Aggregates (40mm) -Sample 1
Technical Reference	:	IS : 2386 (Part 1) -1963 (RA-2011)
Sample Received on	:	28.10.2017
Date of Testing	:	30.10.2017

Total Wt. of Aggregates in gms= **5000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	98.08	95-100	85-100
20	34.30	30-70	0-20
10	26.52	10-35	0-5
4.75	4.06	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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VIDYARANI P.K.
Technical Manager

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Job No. : CTCE/BBMP/W.No.13/KRIDL/Steel/2017-18 31.10.2017

TEST REPORT ON REINFORCEMENT STEEL

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of work**	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
*** Samples ID**	:	8mm Bar
Technical Reference	:	IS: 1786-2008
Date of Testing	:	31.10.2017

Sl No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm2	Tensile strength (Ultimate stress) N/mm2	Elongation percent gauge length		
1	8	0.39	510	551	13.10	O.K	O.K

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Civil-tech Consultants & Engineers
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Job No. : CTCE/BBMP/W.No.13/KRIDL/Steel/2017-18 31.10.2017

TEST REPORT ON REINFORCEMENT STEEL

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of work	:	Construction of RCC drains at Prashanth Nagara, Mathrushri Layout and other roads in ward no. 13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/55/2017-18 Dated: 24.10.2017
* Samples ID	:	10 mm Bar
Technical Reference	:	IS: 1786-2008
Date of Testing	:	31.10.2017

Sl No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm2	Tensile strength (Ultimate stress) N/mm2	Elongation percent gauge length		
1	10	0.62	513	554	13.30	O.K	O.K

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AE-13

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